

AMENDMENTS

IN THE CLAIMS

1. (currently amended) A method of load balancing in an upstream proxy, the method comprising:

receiving, at a control node, Voice over Internet Protocol (VoIP) information from a plurality of downstream proxies the VoIP information including a delay time between the control node and the downstream proxies;

maintaining a list of downstream proxies;

assigning a weight to each of the downstream proxies in the list, the weight based upon the information including the delay time received from the downstream proxies; and

wherein the proxies implement the SIP protocol, and

distributing a traffic load to one of the plurality of downstream proxies based in part on the weight of each of the downstream proxies.

2. (original) The method of claim 1 further comprising receiving a request and using the weights to assign a proxy.

3. (previously amended) The method of claim 1 wherein the information includes a traffic load on a particular downstream proxy.

4. (previously amended) The method of claim 1 wherein the information includes a number of requests in responses of each of the downstream proxies.

5. (previously amended) The method of claim 3 wherein a load for a particular downstream proxy is determined by querying the processes of the downstream proxy.

6. (currently amended) A readable memory device for load balancing, the device comprising:

means for receiving Voice over Internet Protocol (VoIP) information from a plurality of downstream proxies, the VoIP information including a delay time between the control node and the downstream proxies;

means for maintaining a list of the plurality of downstream proxies;

means for assigning a weight to each of the downstream proxies in the list, the weight based upon the information received from the downstream proxies and

means for implementing the SIP protocol, and

means for assigning a load to one of the downstream proxies based in part on the weight of the downstream proxies.

7. (previously amended) The device of claim 6 further comprising:

means for receiving a request; and

means for using the weights to assign a proxy.

8. (currently amended) A system for providing load balancing, the system comprising:

a plurality of proxies;

a control node coupled to the plurality of proxies, the control node receiving Voice over Internet Protocol (VoIP) information including a delay time between the control node and the downstream proxies from the plurality of proxies, maintaining a list of the plurality of proxies, and assigning a weight to each of the proxies in the list, the weight based upon the VoIP information received from the proxies; and

wherein the proxies implement the SIP protocol, and

wherein the control node distributes a traffic load to one of the plurality of downstream proxies based in part on the weight of each of the downstream proxies.

9. (original) The system of claim 9 wherein the control node receives a request and uses the weights to assign a proxy to the request.

10. (currently amended) A method for assigning weights to a group of proxies, the method comprising the steps of:

sending, from a control node, a Voice over Internet Protocol (VoIP) message to each of the proxies;

determining a response time for each of the messages sent to each of the proxies;

assigning a weight to each of the proxies based upon the response time of the message sent to the proxies;

receiving a message;

assigning a proxy based upon the weight; ~~and~~

wherein the proxies implement the SIP protocol; and

distributing a traffic load to one of the plurality of downstream proxies based in part on

the weight of at least one of the downstream proxies.

11. (currently amended) A method for assigning weights to a group of proxies, the method comprising the steps of:

sending a message to each of the proxies requesting the proxy to send Voice over Internet Protocol (VoIP) information indicative of the load of the proxy;

receiving VoIP information at a control node indicating the load of each of the proxies;

assigning a weight to each of the proxies based upon the response time of the message sent to the proxies;

receiving a message;

assigning a proxy to the message based upon the weights of the proxies; ~~and~~

wherein the proxies implement the SIP protocol; and

distributing a load to one of the plurality of downstream proxies based in part on a downstream proxy weight.

12. (original) The method of claim 11 wherein the message sent to the proxies is an INVITE message.

13. (currently amended) A system for load balancing, the system comprising:
a plurality of proxies;
a control node coupled to the plurality of proxies, the control node receiving Voice over Internet Protocol (VoIP) messages from users on a network, the control node including a table of weights, each of the weights associated with one of the plurality of proxies, the weights

determined by information including a delay time between the control node and the proxies received by the control node from the proxies, the control node distributing a traffic load to one of the plurality of downstream proxies based in part on the weight of each of the downstream proxies;

a location server coupled to the control node, the location server directing the messages received by the control node to the proxies; and

wherein the proxies implement the SIP protocol.

14. (cancelled without prejudice) The system of claim 13 wherein the proxies implement the SIP protocol.

15. (cancelled without prejudice) A system of claim 13 wherein the information received by the control node from the proxies indicates a time delay.

16. (previously amended) The system of claim 13 wherein the Voice over Internet Protocol (VoIP) messages received by the control node further includes a loading of the proxies.

17. (previously amended) The system of claim 13 wherein the system includes a plurality of records.

18. (currently amended) A readable memory device for load balancing, comprising:
first code for receiving Voice over Internet Protocol (VoIP) information from a plurality of downstream proxies;

second code for maintaining a list of downstream proxies at a control node; and

third code for assigning a weight to each of the downstream proxies in the list, the weight based upon (VoIP) information including a delay time between the control node and the proxies, received from the downstream proxies

wherein the proxies implement SIP protocol; and

fourth code for distributing a traffic load to one of the plurality of downstream proxies based in part on the weight of each of the downstream proxies.

19. (currently amended) A readable memory device having stored therein instructions for causing a processing unit to execute the following method:

receiving, at a control node, Voice over Internet Protocol (VoIP) information from a plurality of downstream proxies the information including a delay time between the control node and the downstream proxies;

maintaining a list of the downstream proxies; and

assigning a weight to each of the downstream proxies in the list, the weight based upon the information received from the downstream proxies;

wherein the proxies implement the SIP protocol; and

distributing a traffic load to one of the plurality of downstream proxies based in part on the weight of each of the downstream proxies.

20. (cancelled without prejudice) The method of claim 1, wherein the proxies implement the SIP protocol.

21. (cancelled without prejudice) The control node of claim 6, wherein the proxies implement the SIP protocol.

22. (cancelled without prejudice) The system of claim 8, wherein the proxies implement the SIP protocol.

23. (cancelled without prejudice) The method of claim 10, wherein the proxies implement the SIP protocol.

24. (cancelled without prejudice) The computer program of claim 18, wherein the proxies implement the SIP protocol.

25. (cancelled without prejudice) The computer readable medium of claim 19, wherein the proxies implement the SIP protocol.